

WHAT IS CLAIMED IS:

1. A method of wireless LAN (Local Area Network) communication, comprising the steps of:

communicating data between a wireless LAN equipment  
5 for each of service providers to be connected to an Internet and a user terminal for each of users, wherein said wireless LAN equipment is managed by any one of the service providers and is shared by the service providers;

collecting data of a communication amount and  
10 communication time of said user terminal of the each of users, when said user terminal communicates with said wireless LAN equipment using wireless LAN communication; and

calculating data of a charge on usage of said  
wireless LAN equipment in accordance with the collected data,  
15 whereby the service provider to be contracted with the user of said user terminal pays the charge to the service provider for managing said wireless LAN equipment.

2. A method of wireless LAN (Local Area Network) communication, comprising the steps of:

communicating data between a wireless LAN equipment  
for each of service providers to be connected to an Internet and a user terminal for each of users, wherein said wireless LAN equipment is pre-sited in common space managed by a  
25 manager and is shared by the service providers;

collecting data of a communication amount and  
communication time of said user terminal of the each of users, when said user terminal communicates with said wireless LAN equipment using wireless LAN communication; and

calculating data of a charge on usage of said  
30 wireless LAN equipment in accordance with the collected data, whereby the service provider to be contracted with the user of said user terminal pays the charge to the manager.

3. A method of wireless LAN (Local Area Network) communication, comprising the steps of:

communicating data between a wireless LAN equipment  
5 for each of service providers to be connected to an Internet and a user terminal used for users, wherein said wireless LAN equipment is managed by any one of the service providers and is shared by the service providers;

enabling said user terminal to select the wireless  
10 LAN equipment with high communication speed;

exchanging user's information among the service  
providers, when said user terminal selects said wireless LAN  
equipment and the selected wireless LAN equipment is managed  
by the service provider not to be contracted the user of said  
15 user terminal;

collecting data of a communication amount and  
communication time of said user terminal of the each of users,  
when said user terminal communicates with said wireless LAN  
equipment using wireless LAN communication; and

20 calculating data of a charge on usage of said  
wireless LAN equipment in accordance with said collected data  
and said exchanged user information, whereby the service  
provider to be contracted with the user of said user terminal  
pays said charge to the service provider for managing said  
25 wireless LAN equipment.

4. A system for wireless LAN (Local Area Network) communication, comprising:

means for communicating data between a wireless LAN  
30 equipment for each of service providers to be connected to an Internet and a user terminal for each of users, wherein said wireless LAN equipment is managed by any one of the services provider and is shared by the service providers;

means for collecting data of a communication amount and communication time of said user terminal of the each of users when said user terminal communicating with said wireless LAN equipment using wireless LAN communication; and

5 means for calculating data of a charge on usage of said wireless LAN equipment in accordance with the collected data, whereby the service provider to be contracted with the user of said user terminal pays the charge to the service provider for managing said wireless LAN equipment.

10 5. A system for wireless LAN (Local Area Network) communication, comprising:

means for communicating data between a wireless LAN equipment for each of service providers to be connected to an Internet and a user terminal for each of users, wherein said wireless LAN equipment is pre-sited in common space managed by a manager and is shared by the service providers;

15 means for collecting data of a communication amount and communication time of said user terminal of the each of users when said user terminal communicates with said wireless LAN equipment using wireless LAN communication; and

20 means for calculating data of a charge on usage of said wireless LAN equipment in accordance with the collected data, whereby the service provider to be contracted with the user of said user terminal pays the charge to the manager.

25 6. A system for wireless LAN (Local Area Network) communication, comprising:

30 a wireless LAN equipment for each of service providers connected to an Internet, said wireless LAN equipment being managed by any one of the services provider and being shared by the service providers;

a user terminal for said each of users to be

communicated with said wireless LAN equipment using wireless LAN communication; and

an information exchange server for exchanging user's information among the service providers, wherein

5           said user terminal comprises

selecting means for selecting said wireless LAN equipment with high communication speed, and

said wireless LAN equipment comprises

10           a service management server for managing user's information of the each of users, and for transmitting said user information to said information exchange server, when said selecting means selects wireless LAN equipment managed by the service provider not to be contracted with the user of said user terminal,

15           means for collecting data of a communication amount and communication time of said user terminal of the each of users, when said user terminal communicates with said wireless LAN equipment, and

20           means for calculating data of a charge on usage of said wireless LAN equipment in accordance with the collected data, whereby the service provider to be contracted with the user of said user terminal pays the charge to the service provider for managing said wireless LAN equipment.

25           7. The system according to claim 6, wherein said user information is an ID and a password.

30           8. The system according to claim 6, wherein said user terminal informs a connected service provider of an MAC address via said service management server of the contracted service provider of said user terminal, and said wireless LAN equipment of the connected service provider authenticates whether or not to permit connection

based on the MAC address.

9. The system according to claim 7, wherein  
said information exchange server issues a one-time  
5 password and one-time ID valid for a given time, when said  
user terminal connects to said wireless LAN equipment of the  
non-contracted service provider, and converts the user's  
information based on the one-time password and one-time ID.

10 10. The system according to claim 6, wherein  
said wireless LAN equipment is a wireless LAN base  
station.

11. The system according to claim 6, wherein  
15 said wireless LAN equipment further comprises:  
means for setting a time band for using said  
wireless LAN equipment for the each of service providers; and  
means for refusing connection of said user  
terminal when a time of usage thereof is out of the set time  
20 band for using said wireless LAN equipment.

12. The system according to claim 6, wherein  
said wireless LAN equipment further comprises:  
means for ranking the each of service providers  
25 in accordance with charge plans on usage of said wireless LAN  
equipment; and  
means for restricting connection in order from  
the service providers with a lower rank, in case that an  
average communication speed per user falls below a  
30 predetermined communication speed or in case that a number of  
connections to said wireless LAN equipment exceeds a preset  
number of connections of simultaneously connectable users.

13. The system according to claim 6, wherein  
said wireless LAN equipment further comprises:

means for ranking the each of users in accordance  
with charge plans on usage of said wireless LAN equipment;

5 and

means for restricting connection in order from  
the users with a lower rank, in case that an average  
communication speed per user falls below a predetermined  
communication speed or in case that a number of connections  
10 to said wireless LAN equipment exceeds a preset number of  
connections of simultaneously connectable users.